The National Air Toxic Assessment

Emissions Inventory Development & Processing for the Initial National Scale Assessment

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Science Advisory Board Review

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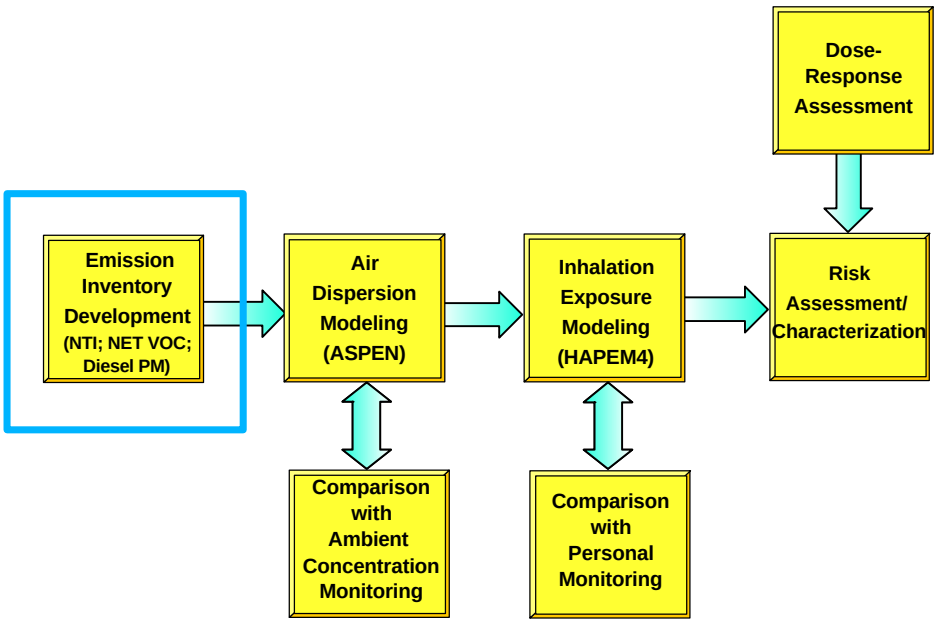
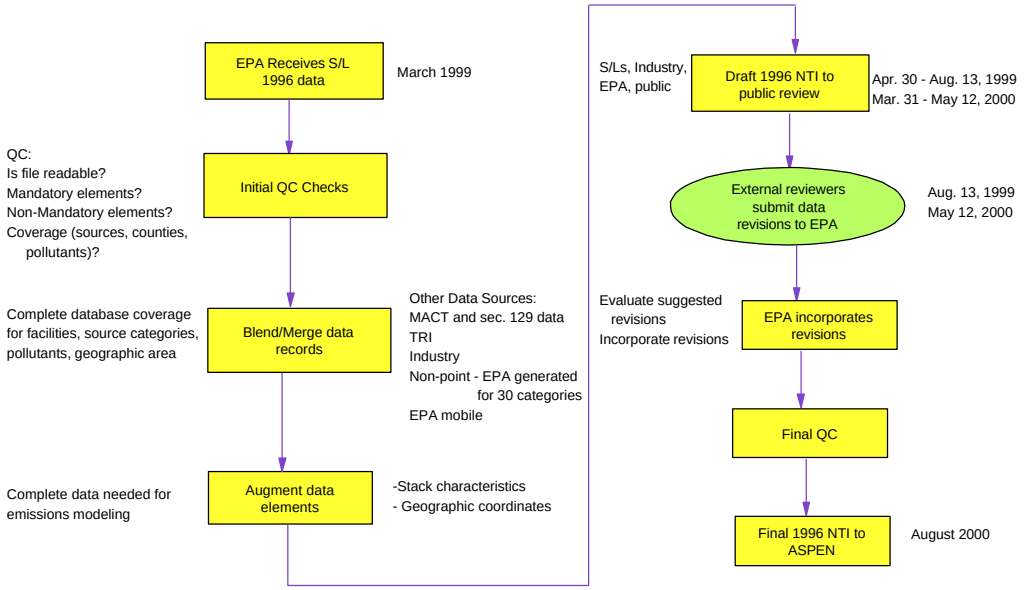
How Does the Emission Inventory Development Fit into the National Scale Assessment?



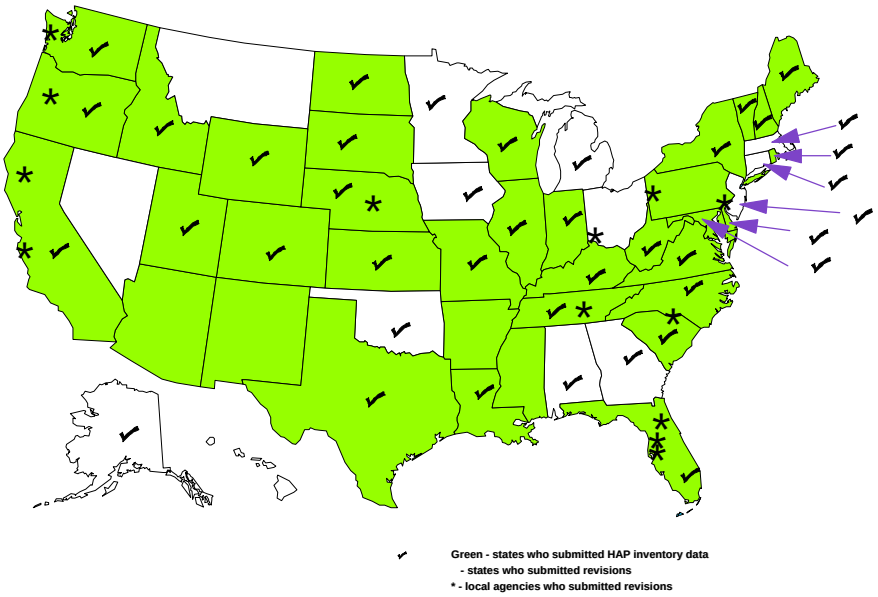
1996 Inventories Used in NATA

- **1996 National Toxics Inventory (NTI)**
  - **32 NATA HAPs**
- **1996 VOC in National Emissions Trends Inventory - used for secondarily formed components of formaldehyde and acetaldehyde**
- **Diesel PM - 1996 Heavy Duty Diesel Rule Inventory**

Compilation of 1996 NTI



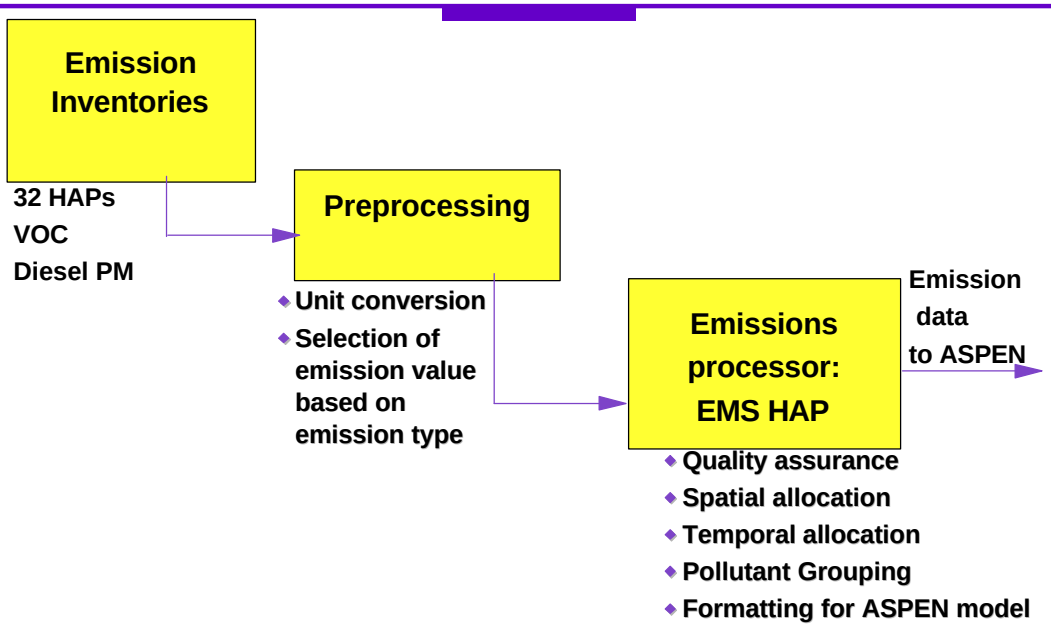
Almost All States Participated in 1996 NTI Development



Contribution of Data Sources to the 1996 NTI

NTI DATA SOURCE	Emissions of 188 HAPs (tpy)	Percent Emissions	Number of Facilities or Categories	Percent Facilities or Categories
All Point Sources	1,174,700	51% of Stationary Emissions	61,568 facilities	
S/L agencies	401,300	34% of point source	55,411 facilities	90% of facilities
MACT	619,000	53% of point source	4,310 facilities	7 % of facilities
TRI	153,500	13% of point source	1,847 facilities	3 % of facilities
All Non-Point Stationary Sources	1,128,610	49% of Stationary Emissions	500 categories	
EPA- generated using efs and activity data	787,100	70% of non-point source	30 categories	6% of non-point categories
S/L and TRI	182,900	16% of non-point source	405 categories	81% of non-point categories
MACT	158,600	14% of non-point source	65 categories	13% of non-point categories

Emissions Inventory Processing for ASPEN



Role of Emission Uncertainty in Ambient Model Concentrations

- **Total Mass**
  - Completeness of emission sources - facilities and source categories
  - Speciation of compound classes for grouping
- **Geographic Distribution of Mass**
  - Facility location data
  - Spatial allocation of non-point sources
- **Vertical Distribution of Mass**
  - Stack parameters
- **Chemical/Physical Characteristics**
  - Assignment of PM coarse/fine splits
  - Assignment of reactivity classes
- **Temporal Resolution**
  - Allocation of emissions from annual to 3 hr

How We Are Improving 1999 NTI and Emissions Processing

- **Total Mass**
  - 1999 NEI Data Incorporation Plan, www.epa.gov/ttn/chief/net/nei_plan.pdf
  - 1999 NTI Q's & A's - preferences on how to report pollutant compound groups (i.e, CR)
    www.epa.gov/ttn/chief/nti/ntiq&a.pdf
  - Enhanced Automated QC of 1999 NTI
  - Standardized reporting of emissions and associated data by S/Ls and Increased number of mandatory data fields (annual emissions)
  - 1999 NTI Training and Outreach to S/Ls, Industry and ROs

- **Geographic Distribution of Mass**
  - Increased number of mandatory data fields including geographic coordinates and source category classification (used for spatial allocation)
  - Reduced number of non-point source categories and disaggregate some non-road mobile categories
  - Use of 2000 Census data & search for updated land use data for improved spatial allocation
  - EIIP Modeling Committee - 50 state/local agency, international, industry, & EPA
    Developing project proposals to improve spatial profiles for ambient dispersion modeling
    Projects to be funded by September 2001

How We Are Improving 1999 NTI and Emissions Processing *(Cont)*

- **Vertical Distribution of Mass**
  - Increased number of mandatory data fields including source category classification (used to default missing stack parameters)

- **Chemical/Physical Characteristics**
  - EIIP Modeling Committee
    Developing project proposals to improve speciation profiles for ambient dispersion modeling
    Projects to be funded by September 2001

- **Temporal Resolution**
  - EIIP Modeling Committee
    Developing project proposals to improve temporal profiles for ambient dispersion modeling
    Projects to be funded by September 2001

Emissions Inventory & Model Processing Summary

- 1996 NTI is a comprehensive national air toxics emissions inventory developed to support EPA's Air Toxics Program.
- 1996 NTI and EMS-HAP processed inventory uses the best available data.
- In order to use the 1996 NATA results, you need to understand emission uncertainties associated with ambient model concentrations.
- We are taking steps to improve the 1999 emissions inventory data used in 1999 NATA.